

## **REMARKS**

### **Amendments to the claims**

Claim 1 is amended to make sure what are “calculated” will not be misinterpreted, and to clarify the original limitation “wherein the first and second horizontal pixel value differences respectively correspond to opposite quadrants of the image with the pixel needing to be interpolated being an origin” in step (a) by dividing the single sentence into respective sentences, so that Examiner’s interpretation that differs from the real operation of the present application is no longer applicable to the currently amended claim 1. Accordingly, similar amendments are made to claims 6 and 9. In addition, claim 14 is amended to make sure what are “calculated” will not be misinterpreted, and to clarify the original limitation “wherein the first and second horizontal pixel value differences respectively correspond to opposite quadrants of the image with the pixel needing to be interpolated being an origin” of the arithmetic unit by dividing the single sentence into respective sentences, so that Examiner’s interpretation that differs from the real operation of the present application is no longer applicable to the currently amended claim 14. Accordingly, similar amendments are made to claim 19. All the aforementioned amendments are supported by the embodiments/variations of the present application. No new matter is introduced. Consideration of these amendments made to claims 1, 6, 9, 14, and 19 is respectfully requested.

### **Claim Rejections**

1. Relating to 35 USC 112 rejections over claims 1-22 (See Office action dated November 28, 2007 at page 2)

#### **Response:**

##### **Claim 1**

Claim 1 has been amended to clarify the original limitation “wherein the first and second horizontal pixel value differences respectively correspond to opposite quadrants of the image with the pixel needing to be interpolated being an origin” in step (a) by dividing the single sentence into respective sentences, so that Examiner’s interpretation that differs from

the real operation of the present application is no longer applicable to the currently amended claim 1.

Please note that according to the currently amended claim 1, any of the first horizontal pixel value differences cannot be misinterpreted as a difference between two pixels of different rows, and any of the second horizontal pixel value differences cannot be misinterpreted as a difference between two pixels of different rows. Thus, no interpretation may result in a contradiction such as that part (a) and part (b) of the original claim 1 contradict each other. The 35 USC 112 rejection over claim 1 is therefore overcome.

Claims 2-5, 7-8, and 10-13

In light of the above statements for claim 1, as no further claim language can be misinterpreted, applicant respectfully asserts that the 35 USC 112 rejections over claims 2-5, 7-8, and 10-13, dependent upon claim 1, are overcome.

Claims 6 and 9

In light of the above statements for claim 1, as similar amendments are also made to claims 6 and 9 to prevent misinterpretation from being applied to the currently amended claims 6 and 9, applicant respectfully asserts that the 35 USC 112 rejections over claims 6 and 9 are overcome.

Claim 14

Claim 14 has been amended to clarify the original limitation “wherein the first and second horizontal pixel value differences respectively correspond to opposite quadrants of the image with the pixel needing to be interpolated being an origin” of the arithmetic unit by dividing the single sentence into respective sentences, so that Examiner’s interpretation that differs from the real operation of the present application is no longer applicable to the currently amended claim 14.

In light of the above statements for claim 1, as similar amendments are made to claim 14 to prevent misinterpretation from being applied to the currently amended claim 14, applicant respectfully asserts that the 35 USC 112 rejection over claim 14 is overcome.

Claims 15-18

In light of the above statements for claim 14, as no further claim language can be misinterpreted, applicant respectfully asserts that the 35 USC 112 rejections over claims 15-18, dependent upon claim 14, are overcome.

Claim 19

5           In light of the above statements for claim 14, as similar amendments are also made to claim 19 to prevent misinterpretation from being applied to the currently amended claim 19, applicant respectfully asserts that the 35 USC 112 rejection over claim 19 is overcome.

Claims 20-22

10           As claims 20-22 do not mention a limitation such as the original limitation “wherein the first and second horizontal pixel value differences respectively correspond to opposite quadrants of the image with the pixel needing to be interpolated being an origin” in the original claim 1, no misinterpretation may result in a contradiction pertinent to claims 20-22 (e.g. the contradiction that part (a) and part (b) of the original claim 1 contradict each other under Examiner’s interpretation). Thus, applicant respectfully asserts that the 35 USC 112  
15       rejections over claims 20-22 are overcome.

2.     Relating to 35 USC 102(b) rejections over claims 1, 3-5, 10-14, 16-18, and 20-21 (See Office action dated November 28, 2007 at page 3)

**Response:**

20           As stated by Examiner, the search for and application of the prior art would be applied in view of Examiner’s interpretation. In light of the above response to the 35 USC 112 rejection over claim 1, Examiner’s interpretation that differs from the real operation of the present application is no longer applicable to the claims such as the currently amended claims 1 and 14 and the original claim 20.

25     Claim 1

Referring to col. 7, line 48 - col. 8, line 6 together with FIGS. 5b-5d of Jiang (US 6421090), Jiang calculates a plurality of differences (e.g.  $(A_0 - B_2)$ ,  $(A_1 - B_3)$ , and  $(A_2 - B_4)$  for the situation shown in FIG. 5b thereof) and then the absolute values of these respective

differences are then summed to yield a value (e.g. Diff90). Thus, each of the aforementioned differences calculated by Jiang is a difference between two pixels of different rows.

However, the first horizontal pixel value differences mentioned in the currently amended claim 1 are differences between pixels of the same row, and the second horizontal  
5 pixel value differences in the currently amended claim 1 are differences between pixels of the same row.

With the present invention being considered as a whole, it is clear that the prior art reference fails to teach or suggest the claimed features of the currently amended claim 1, the claimed feature “calculating a plurality of first horizontal pixel value differences **between**  
10 **pixels positioned in the first row** and calculating a plurality of second horizontal pixel value differences **between pixels positioned in the second row**” especially. (*emphasis added*) Upon careful review of Jiang’s teachings, the applicant finds no description pertinent to the above-identified claimed features. Further, applicant respectfully points out that it is impossible for Jiang to disclose or teach the claimed feature “wherein the first horizontal  
15 pixel value differences correspond to a first quadrant of the image with the pixel needing to be interpolated being an origin, the second horizontal pixel value differences correspond to a second quadrant of the image with the pixel needing to be interpolated being the origin, and the first quadrant is opposite to the second quadrant” of the currently amended claim 1 since Jiang does not disclose “calculating a plurality of first horizontal pixel value differences  
20 **between pixels positioned in the first row** and calculating a plurality of second horizontal pixel value differences **between pixels positioned in the second row**” as claimed in the amended claim 1 in the present application. Applicant respectfully asserts that the currently amended claim 1 is not anticipated by the cited reference. Consideration of the currently amended claim 1 is respectfully requested.

25 Claims 3-5 and 10-13

Claims 3-5 and 10-13 are dependent on the amended claim 1, and should be allowed if the currently amended claim 1 is found allowable.

Claim 14

In regard to amended claim 14, similar amendments have been made to claim 14 according to the currently amended claim 1. In light of the above statements for claim 1, applicant respectfully asserts that the currently amended claim 14 is not anticipated by the cited reference. Consideration of the currently amended claim 14 is respectfully requested.

5     Claims 16-18

Claims 16-18 are dependent on the amended claim 14, and should be allowed if the currently amended claim 14 is found allowable.

Claim 20

10     In light of the above statements for claim 1, applicant respectfully asserts that claim 20 is not anticipated by the cited reference. Reconsideration of claim 20 is respectfully requested.

Claim 21

Claim 21 is dependent on claim 20, and should be allowed if claim 20 is found allowable.

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3.     Relating to 35 USC 103(a) rejections over claims 6-9 and 19 (See Office action dated November 28, 2007 at page 8)

**Response:**

20     Upon careful review of Jiang's and Minami's teachings, the applicant finds no description pertinent to the claimed features "calculating a plurality of third horizontal pixel value differences **between pixels positioned in the third row** and calculating a plurality of fourth horizontal pixel value differences **between pixels positioned in the fourth row**". (*emphasis added*). Applicant respectfully asserts that above-identified features recited in claims 6, 9, and 19 are not obvious in view of the prior art references of Jiang and Minami,  
25     and that the claimed features of dependent claims 7-8 depending on claim 6 are therefore not obvious in view of the prior art references of Jiang and Minami. That is, claims 6-9 and 19 are patentable over the combined teaching of the cited references. In addition, claims 6-9 and 19 are dependent on claims 1 and 14 respectively, and should be allowed if claims 1 and 14

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are found allowable.

### Other matters

5           Applicant acknowledges and appreciates the conditional allowance of the original  
claims 2, 15 and 22.

### Conclusion:

Thus, all pending claims are submitted to be in condition for allowance with respect to  
10 the cited arts for at least the reasons presented above. Applicant respectfully requests that a  
timely Notice of Allowance be issued in this case.

Sincerely yours,

15 Winston Khan Date: 01.10.2008

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